PM Conformity Hot Spot Analysis
Project Summary Form for Interagency Consultation

The purpose of this form is to provide sufficient information to allow the Transportation Conformity Working Group (TCWG) to determine if a project requires a project-level PM hot spot analysis pursuant to Federal Conformity Regulations.

The form is not required under the following circumstances:

1. The project sponsor determines that a project-level PM hot spot analysis is required or otherwise elects to perform the analysis; or
2. The project does not require a project-level PM hot spot analysis since it:
    a. Is exempt pursuant to 40 CFR 93.126; or
    b. Is a traffic signal synchronization project under 40 CFR 93.128; or
    c. Uses no Federal funds AND requires no Federal approval; or
    d. Is located in a Federal PM attainment area (note: PM10 and PM2.5 areas differ).

Projects other than those listed above may or may not need a project-level PM hot spot analysis depending on whether it is considered a "Project of Air Quality Concern" (POAQC), and should be brought before the TCWG for a determination.

It is the responsibility of the project sponsor to ensure that the form is filled out completely and provides a sufficient level of detail for the TCWG to make an informed decision on whether or not a project requires a project-level PM hot spot analysis. For example, the TCWG will be reviewing the effects of the project, and thus part of the required information includes build/no build traffic data. It is also the responsibility of the project sponsor to ensure a representative is available to discuss the project at the TCWG meeting if necessary.

Instructions:

1) Fill out form in its entirety. Enter information in gray input fields.

2) Be sure to include RTIP ID#. See http://scag.ca.gov/rtip/ if necessary.

3) Submit completed form to your local Transportation Commission who will submit it to the MPO. Caltrans projects can be submitted by Caltrans District representative.

The TCWG meets the fourth Tuesday of each month at SCAG Headquarters, 818 W. 7th Street, 12th Floor, Los Angeles, CA 90017. Participation is also available via teleconference. Call (213) 236-1800 prior to meeting to get the call-in number and pass-code.

Forms must be submitted by the second Tuesday of the month to be considered at that month's TCWG meeting.

REFERENCE

Criteria for Projects of Air Quality Concern (40 CFR 93.123(b)(1)) – PM_{10} and $PM_{2.5}$ Hot Spots

(i) New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;

(ii) Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;

(iii) New bus and rail terminals and transfer points than have a significant number of diesel vehicles congregating at a single location;

(iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and

(v) Projects in or affecting locations, areas, or categories of sites which are identified in the PM10 or PM2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Links to more information:

http://www.fhwa.dot.gov/environment/conform.htm

http://www.epa.gov/otaq/stateresources/transconf/index.htm

TABLE 1
Type of Project

- New state highway
- Change to existing state highway
- New regionally significant street
- Change to existing regionally significant street
- New interchange
- Reconfigure existing interchange
- Intersection channelization
- Intersection signalization
- Roadway realignment
- Bus, rail, or inter-modal facility/terminal/transfer point
- Truck weight/inspection station
- At or affects location identified in the SIP as a site of actual or possible violation of NAAQS

RTIP ID# *(required)* ORA000173

Project Description *(clearly describe project)*
The City of Mission Viejo proposes to widen La Paz Road, from Chrisanta Drive to Muirlands Boulevard (0.21 mile), to improve existing and future traffic operation conditions along the roadway. As part of the project, the structurally deficient westbound La Paz Road Overhead (55C0215L) and eastbound La Paz Road Overhead (55C0215R) would be widened and rehabilitated.

The widening of the roadway segment would upgrade the segment from a primary arterial (4-lanes divided) to a major arterial (6-lanes divided) while improving the level-of service (LOS) of the roadway segment in both directions. The wider roadway segment would allow for the possible reconfiguration of lanes at the two adjacent intersections and would facilitate higher intersection capacity. The two intersections involved are La Paz Road at Muirlands Boulevard, and La Paz Road at Chrisanta Drive. The proposed improvements would add capacity to both the roadway segment and the two intersections.

Type of Project *(use Table 1 on instruction sheet)*
Change to existing regionally significant street

County	**Narrative Location/Route & Postmiles:** La Paz Road between Chrisanta Drive and Muirlands Boulevard/Interstate 5 (0.21 mile) **Caltrans Projects – EA#** Local Assistance Project: Federal Number: BHLS-5451(023)
Orange	

Lead Agency: City of Mission Viejo

Contact Person	**Phone#**	**Fax#**	**Email**
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Hot Spot Pollutant of Concern *(check one or both)* **PM2.5** **PM10**

PM2.5	**MAYBE Project of Air Quality Concern**	X	**NOT Project of Air Quality Concern**
PM10	**MAYBE Project of Air Quality Concern**	X	**NOT Project of Air Quality Concern**

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

Categorical Exclusion (NEPA)	**EA or Draft EIS**	**FONSI or Final EIS**	X	**PS&E or Construction**	**Other**

Scheduled Date of Federal Action:

Current Programming Dates *as appropriate*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	Prior RTIP	July 2004	December 2006	December 2007
End	Prior RTIP	April 2007	September 2007	December 2008

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*

The purpose of the proposed project is to improve traffic conditions along La Paz Road and to remove the La Paz Road overhead structures from the Eligible Bridge List (EBL).

Traffic congestion has long been a problem along La Paz Road between Muirlands Boulevard/Interstate 5 and Chrisanta Drive. This segment of La Paz Road is the central access link between the City and the freeway. Chrisanta Drive, north of La Paz Road is a commercial area and is the only southerly access for a large residential area beyond. Chrisanta Drive, south of La Paz Road is a large residential area, as well as several schools, including Mission Viejo High School. Shortly after the City incorporated in 1988, it identified the need to improve the intersection capacities of both the La Paz/Chrisanta and La Paz/Muirlands/I-5 intersections as well as the segment of La Paz Road connecting them. In the early 1990's, the La Paz/Chrisanta intersection was widened, and several years ago, the La Paz/Muirlands/I-5 intersection was widened. While these improvements helped improve levels of service, the connecting portion of La Paz Road remains a "choke point" for traffic. Under existing conditions, the roadway segment at La Paz currently operates at LOS F. Future volumes projected for the year 2025 would result in increased congestion and LOS F. By widening La Paz Road to six lanes, the LOS would improve from F to E, based on the project traffic study (Parsons, 2006). In addition, the existing width of the roadway is less than the standard minimum four-lane width of 24.4 m (80 ft) for a Primary Highway, as it varies from 21.3 m (70 ft) wide curb-to-curb to 24 m (79 ft) wide curb-to-curb. Similarly, the traffic study concludes that the LOS at the two intersections would also improve.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

Mainly residential and institutional (several school sites, including Mission Viejo High School just south of the project). North of the project area includes commercial uses.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Existing LOS is F at Chrisanta Drive intersection at the east end of the bridge to be replaced. Existing (2003) AADT is 50,600. Existing truck percentage is approximately 5.1% and, based on EMFAC2002, is expected to fall to 4.7% in 2025, since the surrounding land uses do not include any intensive truck traffic uses such as warehouse or industrial.

La Paz Roadway & Bridge Widening Project
Opening Year 2012

Condition	Location	AADT[1]	LOS[2]	% Trucks[3]	Truck AADT
Build	La Paz Rd: Muirlands Blvd to Chrisanta Dr	52,600	C-E	4.94	2,598
No Build	La Paz Rd: Muirlands Blvd to Chrisanta Dr	52,400	C-F	4.94	2,589

1. Interpolated from existing (2003) and 2025 No Build volumes presented in "Traffic Impact Analysis: La Paz Roadway and Bridge Widening Project"
2. PM Peak Hour at the intersections of La Paz Rd with Muirlands Blvd and Chrisanta Dr, respectively, using interpolated traffic volumes.
3. Interpolated to 2012 from EMFAC2002 existing truck percentage (5.1%) and 2025 forecast (4.7%).

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Horizon year (2025): Build condition, LOS is predicted to be "F" at the Chrisanta Drive intersection at the east end of the bridge to be replaced with average vehicular delay of 102.9 seconds in the PM peak hour. No-Build condition LOS would also be "F" with substantially more delay averaging 176.8 seconds in the PM peak hour. Forecast AADT for 2025 is 55,600 for the build condition. County diesel vehicle fraction for 2025 (estimated using EMFAC2002) is approximately 4.7%. Due to the fact that the project surrounding area is mostly build-out at present and consisting primarily of residential and some light retail uses, a reduction in diesel or truck traffic along the project corridor is anticipated.

La Paz Roadway & Bridge Widening Project
Design Year 2025

Condition	Location	AADT[1]	LOS[2]	% Trucks[3]	Truck AADT
Build	La Paz Rd: Muirlands Blvd to Chrisanta Dr	55,600	E-F	4.7	2,613
No Build	La Paz Rd: Muirlands Blvd to Chrisanta Dr	55,100	E-F	4.7	2,590

1. Interpolated from existing (2003) and 2025 No Build volumes presented in "Traffic Impact Analysis: La Paz Roadway and Bridge Widening Project"
2. PM Peak Hour at the intersections of La Paz Rd with Muirlands Blvd and Chrisanta Dr, respectively, from "Traffic Impact Analysis: La Paz Roadway and Bridge Widening Project". Build condition changes average vehicle delay at Muirlands from 68.0 seconds to 72.1 seconds and at Chrisanta from 176.8 to 102.9 seconds.
3. EMFAC2002

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT
N/A

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT
N/A

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*

Based on the scope of the proposed improvements, localized traffic would not be redistributed. Additionally, the proposed project would improve the LOS and reduce delay time by widening La Paz Road to 6 lanes. In addition, the existing width of the roadway is less than the standard minimum four-lane width of 24.4 m (80 ft) for a Primary Highway, as it varies from 21.3 m (70 ft) wide curb-to-curb to 24 m (79 ft) wide curb-to-curb. The project proposes to symmetrically widen La Paz Road to accommodate one additional lane on each side of the roadway, to a total of six lanes, and the total curb-to-curb width of the widened roadway would measure 28 m (92 ft).

The project would not result in significant increase (if any) in the number of diesel trucks and diesel busses that utilize the facility, but would help relieve the existing congestion as a result of providing additional capacity and standard width for the roadway segment. The project traffic study shows that the traffic volume (both current and future horizon year 2025) would not change with the project, compared to the no-build conditions. The traffic study also projects the following improvements:

Segment of La Paz Road between Muirlands Boulevard and Chrisanta Drive
The roadway segment currently operates at a level of service "F". Without the improvement, the roadway segment would continue to operate at LOS F with increasingly severe congestion. If the roadway segment were improved today, the LOS would be elevated to "D". With project, in year 2025, the improved roadway segment is projected to operate at LOS "E".

Intersection of La Paz Road and Muirlands Boulevard
The intersection currently operates at LOS "A" and "B" during the morning and evening peak hours, respectively. In year 2025 and without the proposed improvements, the level of service of the intersection would be reduced to LOS "D" and "E" during the morning and evening peak hours, respectively. With the implementation of the proposed improvements, the intersection in year 2025 would also operate at LOS "D" and "E" during the morning and evening peak periods, respectively, however, the expansion would reduce average delay time per vehicle, and would offer more flexibility in the future to accommodate temporal and spatial shifts in travel patterns.

Intersection of La Paz Road and Chrisanta Drive
The intersection currently operates at LOS "D" and "E" during the morning and evening peak hours, respectively. In year 2025 and without the proposed improvements, the level of service of the intersection would be reduced to LOS "E/F" and "F" during the morning and evening peak hours, respectively. With implementation of the proposed improvements, the intersection LOS in year 2025 would improve to operate at LOS "D/E" and "E" during the morning and evening peak periods, respectively. The improvements would provide reduction in delay time per vehicle of at least 33 percent at the worst peak period.

As concluded by the traffic study, the project would result in less congestion and reduced delay time per vehicle at the peak traffic periods. Lower delay and less congestion would result in lower emissions and improved local air quality, as compared with no-build condition.

Comments/Explanation/Details *(attach additional sheets as necessary)*
The La Paz Roadway and Bridge widening project would not be considered a project of air quality concern (POAQC), as defined by the Conformity Rule and 40 CFR 93.123(b)(1).

The proposed project is within a nonattainment area for federal $PM_{2.5}$ and PM_{10} standards. Therefore, per 40 CFR Part 93 analyses are required for conformity purposes. However, the EPA does not require hotspot analyses, qualitative or quantitative, for projects that are not considered as POAQC, per the definition of section 93.123(b)(1). The project does not qualify as a POAQC because of the following reasons:

i. The proposed project is not a new or expanded highway project. The proposed project is a roadway Improvement/widening project that does not increase the capacity of the surrounding roadways/highways. This type of project improves roadway operations by reducing traffic congestion and reducing delay time per vehicle. Based on the Traffic Study (Parsons, 2004), the proposed project would not increase the traffic volumes along the local roadways. The traffic volume along the proposed segment of La Paz Road would not exceed the 125,000 average daily trips (ADT) threshold for a POAQC. In addition, based on the traffic volumes obtained from running the EMFAC2002 model for Orange County in 2005 and 2025, the truck traffic would be less than five percent which is below the eight percent diesel truck volume or the 10,000 truck ADT threshold for POAQC.

ii. The proposed project would not affect intersections that are at level of service (LOS) D, E, or F with a significant number of diesel vehicles. The purpose of the proposed project is to improve the existing condition by reducing the congestion and delay time per vehicle and/or improving the LOS at intersections within the project vicinity. The LOS conditions in the project vicinity with and without the proposed project are shown in the following table.

Comparison of Traffic Conditions for Project No-Build and Build Scenarios (for Design Year 2025)

No Build

Location	AM Peak			PM Peak		
	V/C	Delay	LOS*	V/C	Delay	LOS*
La Paz Road / Muirlands Boulevard	0.859	63.9	D/E	0.903	72.6	E
La Paz Road / Chrisanta Drive	0.996	83.9	E/F	1.111	172.9	F
La Paz Road _ Chrisanta Dr to Muirlands Bl			F			F

Build

Location	AM Peak			PM Peak		
	V/C	Delay	LOS*	V/C	Delay	LOS*
La Paz Road / Muirlands Boulevard	0.859	63.1	D/E	0.903	72.1	E
La Paz Road / Chrisanta Drive	0.894	55.1	D/E	0.949	102.9	E/F
La Paz Road _ Chrisanta Dr to Muirlands Bl			E			E

Notes: V/C = volume to capacity ratio; LOS = level of service
** The LOS values are estimated using two methods: Intersection Capacity Utilization (ICU) and the Highway Capacity Manual (HCM) methodologies. Where the two differed they are presented as ICU/HCM results.*

Source: Project Traffic Study (Parsons, 2004)

iii. The proposed project does not include the construction of a new bus or rail terminal.

iv. The proposed project does not expand an existing bus or rail terminal.

Therefore, the proposed project meets the Clean Air Act requirements and 40 CFR 93.116 without a qualitative hot-spot analysis pursuant to FHWA and USEPA Transportation Conformity Guidance for Qualitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas. The proposed project would not create a new, or worsen an existing, PM_{10} or $PM_{2.5}$ violation, and it would not lead to redistribution of traffic, principally truck traffic.